STATEMENT OF L. NICHOLAS LACEY, DIRECTOR OF FLIGHT STANDARDS SERVICE, FEDERAL AVIATION ADMINISTRATION, BEFORE THE SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION, ON THE AGE-60 RULE. MARCH 13, 2001.

Mr. Chairman and Members of the Committee:

I would like to thank you for the opportunity to appear before you today to discuss the Federal Aviation Administration's (FAA) Age-60 rule. I am accompanied today by my colleague, Dr. Jon Jordan, Federal Air Surgeon. The Age-60 rule provides that a pilot may not engage in what are known as part 121 operations if the pilot has reached his 60th birthday. Part 121 covers scheduled passenger operations using multiengine jet aircraft, scheduled passenger operations with multiengine propeller airplanes having a passenger seat configuration of 10 or more seats, and common carriage operations of all-cargo airplanes having a payload capacity of 7500 pounds or more.

The Age-60 rule is controversial. However, it represents the FAA's best determination of the time when a general decline in health-related functions and overall cognitive capabilities have reached a level where decrements in a pilot's performance may jeopardize safety. Our rule means that a pilot who reaches age 60 must leave part 121 operations, but it does not mean that he or she can no longer play an important role in aviation. Many pilots continue to work for part 121 airlines in the screening, recruitment and training of pilot applicants, serve as flight engineers, or fly in non-part 121 operations, or become flight instructors, or, fortunately for us, work as safety inspectors for the FAA.

Since its adoption in 1959, the FAA has reviewed the Age-60 rule several times to determine whether new and sufficient evidence exists to warrant a reconsideration of the regulation. The last completed, comprehensive review of the rule was in 1993. That year the FAA received the report of an independent research company, Hilton Systems, Incorporated. The Hilton Study correlated available accident data with the amount of flying by pilots as a function of age. We released the extensive study, invited public comment on the Age-60 rule, and held two days of hearings. We reviewed over 4,000 comments, which made assertions and expressed opinions but did not provide the FAA with additional facts or analyses sufficient to support changing the rule.

More recently, the Senate Appropriations Committee requested the FAA to study and provide data regarding relative accident rates based on pilot age. The FAA's Civil Aeromedical Institute (CAMI) conducted a four-part study. Two parts of the study--an annotated bibliography of the scientific literature (1990-1999), and a re-analysis of the *Chicago Tribune* study data (1999) relating pilot age and accident rates--were sent to Congress last July. The two remaining parts of the study were sent to Congress on March 8th. They include an analysis of the relationship between pilot age, experience, and accidents/incidents for air transport pilots (ATP) with Class I medical certificates and who are involved in part 121 and 135 operations, and a similar analysis involving ATP and commercial pilots with Class I or Class II medical certificates. Overall, for accidents involving part 121 or 135 operations, these analyses support the hypothesis that a "U-shaped" relationship exists between the age of professional pilots holding Class 1 medical and ATP certificates and their accident rate--meaning the rate of accidents is higher for a young person, then as the person ages (and gains experience) the rate

declines, levels off for a sustained period, and then shows an increase as the person reaches retirement age.

I must emphasize that before making any change to a safety rule, the FAA must be satisfied that the regulation will maintain or raise the current level of safety. What is clear to us from reviewing public comments and relevant literature concerning the Age-60 rule is that there is no single "right answer." What is also clear is that the question for the FAA is one of public safety and determining acceptable risk. At this time, the FAA cannot be assured that changing the Age-60 rule will maintain or raise the level of safety.

There is little dispute that as people age, they experience more illnesses and disorders, and suffer more cognitive decline. Cardiovascular disease rises with age, steeply, beginning between ages 55 and 65, and, though mortality has dropped since 1960, cardiovascular disease remains the most frequent cause of death in pilots and the general population. With this increased incidence of cardiovascular disease in the older population, the risk for unexpected events that could be a threat to safety of flight is increased. Cardiac events (e.g., heart attacks, sudden death) during flight have continued to occur in low but fairly consistent numbers over the years and have caused general aviation accidents.

Other health conditions are known to increase in incidence or to become more complicated with aging. Many present greater difficulties of detection and risk assessment than does cardiovascular disease. Among these are cerebrovascular disease, malignancies; endocrine dysfunction; neurological disorders; psychiatric diagnoses including depression; and decline in

sensory and motor capabilities. There has been an increasing awareness of the more subtle adverse conditions affecting performance, such as those related to cognitive functioning.

Clearly there is a progressive anatomic, physiological, and cognitive decline associated with aging, albeit variable in severity and onset among individuals. We know that, at some age, everyone reaches a level of infirmity or unreliability that is unacceptable in a pilot in commercial passenger air transportation. That age will vary from person to person but cannot yet be predicted in a specific individual.

There are some who argue that the Age-60 rule is arbitrary and without scientific basis. Proponents of raising the retirement age cite action in 1999 by the Joint Aviation Authority (JAA) in Europe which relaxed the standard, allowing a pilot in command to work until age 65, so long as the co-pilot is under age 60. We are not aware of any comprehensive or definitive study that was the basis for the JAA action. We also note that the International Civil Aviation Organization (ICAO) retains as a standard, an age-60 limit for persons acting as pilot-in-command of an aircraft engaged in scheduled international air services or non-scheduled air transport operations for remuneration or hire and recommends that the co-pilot also be under age 60. While admittedly science does not absolutely dictate the age of 60 for commercial passenger pilot retirement, that age is within the age range during which sharp increases in disease mortality and morbidity occur. Until the FAA can be assured that increasing the Age-60 limit will not negatively impact the level of safety, we cannot support a change through legislative action.

One of the reasons cited for raising the retirement age to 65 is that some segments of the industry may be experiencing a pilot shortage. The FAA is certainly aware of the concerns of those who believe that a pilot shortage is imminent, one that could have an adverse impact on small and regional air carriers through high turnover rates. Based on our discussions with industry experts, we understand that, while the major airlines are not having difficulty meeting their pilot hiring goals, there are signs that the regional airlines and those feeding the regionals are starting to see higher turnover and pilot applicants with declining prior experience. This is not surprising given the fact that the major air carriers can offer significantly better pay and benefits. While this may be a legitimate concern, we need to be careful to maintain the highest safety standards possible.

At the end of 2000, the number of active (meaning those with valid medical certificates) airline transport pilots totaled 141,596. We forecast the number of airline transport pilots to grow at an annual rate of 3.1 percent to a total of 204,400 in 2012. It is difficult to determine whether this potential rate of growth will ultimately lead to a significant shortage of pilots. At present, many individuals with airline transport pilot certificates are not employed by regularly scheduled airlines. Some work as general aviation flight instructors while others are not employed as pilots. An airline transport pilot certificate is required for a pilot-in-command for part 121 operations, but a pilot may act as a co-pilot or first officer with only a commercial pilot certificate in many part 121 operations. Airlines could look to persons with commercial pilot certificates (numbering 121,858 at the end of 2000 and projected to increase to 148,800 in 2012) as potential hires. Air carrier equipage, labor agreements, routes and future changes in these factors further complicate the analysis.

In addition, military downsizing will ultimately reduce the importance of ex-military pilots as a source for civilian airlines. From World War II through the mid-90s, approximately 80 percent of major airline new hires were military trained. Today, civilian pilots make up approximately 60 percent of all pilots hired. Non-military sources for pilots are persons with commercial pilot certificates, general aviation pilots, and the more than 200 colleges and universities that offer aviation programs.

The regional air carrier industry is both the entry level for airline transport rated pilots, and an increasingly important source of experienced new pilots for the major commercial jet operators. The most important thing for the regional airline industry and small carriers, such as commuters and on demand operators, is that there is a continuous pool of new pilots to draw upon for training and development. Regional airlines are increasingly developing “bridge programs” with aviation universities that screen and refer graduates who meet the participating airlines’ minimum standards for employment. Also, many of the regional airlines are dropping their “pay for training” programs, which had required their pilot applicants to pay for their training, and reducing their company's minimum qualifications for new hires.

The general aviation industry has taken steps to increase interest in aviation. To help sustain the pool of pilots, the "BE A PILOT" program was initiated in 1996 with a goal of 100,000 new student starts by last year. This program is jointly sponsored and supported by more than 100 general aviation organizations. The program started issuing "introductory flight certificates" to interested respondents in May 1997. The certificates can be redeemed for a first flight lesson

for a cost of $35. To date, over 110,000 certificates have been requested. The program has over 1,600 participating flight schools.

Through our regional offices, the FAA in partnership with state transportation officials, offer information and outreach to local communities about careers in aviation. We maintain an Aviation Education Web site at **www.faa.gov/education** where the public may find a host of career and curriculum materials, industry and educational contact listings, and community outreach initiatives.

Mr. Chairman, the FAA will develop regulations in the context of what is best for public safety. The FAA's primary mission is ensuring the safety of the National Airspace System (NAS). We work hard to manage a growth oriented aviation system--and the constraints on the system that growth imposes--in the most efficient and safe way possible. Our ongoing efforts to modernize the air traffic control system will enhance both the safety and efficiency of the NAS. The FAA also establishes, through our regulations, basic safety standards for aircraft and crewmembers that will ensure the safety of our traveling public. We construct our regulations very carefully, taking into account as many factors as we can, but ultimately, always making the decision that will best enhance aviation safety. While economic factors are certainly a part of that calculation, I am sure the Committee and our colleagues in industry would agree that safety must be the top priority.

That concludes my prepared remarks. I would be happy to answer any questions the Committee may have.